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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NATNAEL, PAULO S M

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/325,930

Applicant(s)

FIESEL, HANS

Examiner

Paulos M. Natnael

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims **1-3, 5-9, 11-12** are rejected under 35 U.S.C. 102(e) as being anticipated by Boie, U.S. Pat. No. 5,748,262.

Considering claim **1**, Boie discloses all claimed subject matter, note;

The claimed frequency converter for converting an intermediate-frequency television signal (s2) to a low frequency by means of a mixer (4) which is fed at its radio-frequency signal input (4.1) with the intermediate-frequency television signal (s2) via an intermediate-frequency filter (3) and at its local-oscillator-signal input (4.2) with a local-oscillator signal (u), the frequency of the local-oscillator signal (u) lying in the range of an adjacent picture carrier (NBT) which is defined

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by a channel spacing (k_0 ; k_0^*) and a respective television standard, and which after the frequency conversion is suppressed as a converted adjacent picture carrier (NBT*), or at least attenuated to a negligible residual amplitude, by means of a high-pass selectivity skirt (HP) of a filter device (5) is met by the circuit of FIG.2 that comprises Mixer 10 which is fed with the intermediate-frequency television signal via an intermediate-frequency Filter 7 and at its local-oscillator signal input with a local-oscillator (12) signal, wherein the second pass band filter is “being adapted to eliminate the signals of the channels adjacent to this constant frequency limit of the transposed signal...” (Col. 3, lines 14-16).

Considering claim 2, wherein the frequency offset (df) of the local-oscillator signal (u) from the adjacent picture carrier (NBT) is less than the high-pass cutoff frequency (f_g) of the filter device is met by the disclosure in FIG.3D, wherein “the frequency $f_{sub.pc}$ has been lowered by a value that depends on the frequency of the local oscillator 12.” (Col. 5, lines 14-16)

Considering claim 3, wherein the mixer (4) is fed at the local-oscillator-signal input (4.2) with a quantized local-oscillator signal (u), and that the harmonics produced by the mixer (4) are suppressed in the television signal (s_4) by means of a low-pass selectivity skirt (TP1, TP2) of the filter device (5) is met by Filter 13, Fig. 2. (See also col. 5, line 62 through col. 6, line 2)

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Considering claim 5, the claimed wherein the local-oscillator-signal input (4.2) is fed from a digitally controlled oscillator (8) whose frequency is determined by control signals (po) from a control unit (9) according to the respective television standard or the respective channel spacing is **inherent**, because a control unit such as a microprocessor, microcomputer, or any type of logic unit would have to be available in order to be able to control the overall function of the system by supply control signals to all units/parts of the system.

Considering claim 6, the claimed wherein after the filter device (5), the television signal (s5) is digitized for the further signal processing by means of an analog-to-digital converter (6) is met by A/D converter 23. (Fig.2).

Considering claim 7, Boie discloses all claimed subject matter, note;

a) the claimed a mixer having first and second inputs and an output is met by Multiplier 11,

(Fig.2)

b) the claimed first filter being coupled to said first input of said mixer and adapted to provide an intermediate-frequency television signal (s2) thereto is met by filter 7, Fig. 2;

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c)the claimed an oscillator coupled to said second input of said mixer and adapted to provide an oscillator-signal (u) lying in a range of an adjacent picture carrier (NBT) which is defined by a channel spacing (ko; ko*) and a respective television standard is met by Oscillator 12, Fig.2;

d) the claimed a second filter coupled to said output of said mixer for attenuating said adjacent picture carrier to a negligible residual amplitude is met by Filter 13, fig.2;

Considering claim 8, see rejection of claim 2;

Considering claim 9, see rejection of claim 3;

Considering claim 11, see rejection of claim 5;

Considering claim 12, see rejection of claim 6;

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims **4, 10, 13-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Boie, U.S. Pat. No. 5,748,262.

Considering claim **4**, Boie discloses all claimed subject matter, except for;

The claimed wherein the local-oscillator signal (u) is a square-wave signal, particularly a signal having the values +1 and -1;

Regarding claim **4**, Boie doesn't appear to disclose whether the local-oscillator signal (u) is a square-wave signal with the values +1 and -1. However, Boie suggests that "the frequency of the oscillator 12 can be modified by means of a voltage U applied to the oscillator 12, in order to adapt the fixed frequency $f_{sub.Lo}$ to the TV standard concerned". (col. 5, lines 2-5)

Therefore, it would have been obvious to the skilled in the art at the time the invention was made to replace the oscillator frequency with a desired value and modify the system to fit a design choice.

Considering claim **10**, see rejection of claim **4**;

Considering claim **13**, Boie discloses the following claimed subject matter, note;

a) filtering an intermediate-frequency signal with a first filter; generating an oscillator signal (u) is met by the filter 7, Fig.2;

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b) mixing said filtered intermediate-frequency signal and said oscillator signal (u) is met by the Mixer 10, Fig.2;

c) filtering said mixed signals using a second filter having a high-pass selectivity skirt located near the frequency origin and a low-pass characteristic for higher frequencies is met by the Filter 13, Fig.2;

Except for;

d) separating said high-pass selectivity skirt filtered signal into visual and audible components for reproduction.

Regarding d), Boie doesn't disclose a method of separating the filtered signal into visual and audible components for reproduction. However, Examiner takes Official Notice here in that separating or demodulating or demultiplexing video/image/picture and audio signal and reproducing separately is well known in the art, and therefore, would have been obvious to the skilled in the art.

Considering claim 14, wherein said first filter comprises a surface-wave filter is met by the disclosure that the "two filters are advantageously SAW (surface wave) filters" (col. 3, lines 19-20)

Considering claim 15, see rejection of claim 2;

Considering claim 16, see rejection of claim 3;

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Considering claim 17, see rejection of claim 4;

Considering claim 18, see rejection of claim 6;

Considering claim 19, see rejection of claim 5;

Considering claim 20, see rejection of claim 5;

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Martinez, U.S. Pat. No. 5,312,514 discloses a receiver (122) where filters 134, 136, 142 and 148 are used to rejection Adjacent Channel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Paulos Natnael** whose telephone number is **(703) 305-0019**. The examiner can normally be reached on **Monday through Friday** from **5:30 a.m.** to **2:00 p.m.**

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John Miller**, can be reached on **(703) 305-4795**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is **(703) 305-3900**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

or:

(703) 872-9314 (for informal or draft communications, please label "PROPOSED" OR "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, V.A. Sixth Floor
(Receptionist).

Paulos M. Natnael

June 3, 2002



JOHN MILLER
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